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November 9, 1992

Ms. Donna Searcy
Secretary
Federal Communications Commission
1919 M Street, NW, Room 222
Washington, DC 20554

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FILE

FEDERAL COMMUNICATIONS COMMISSION
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92-100

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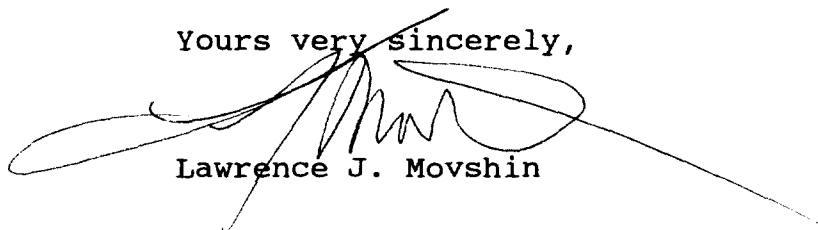
Re: General Docket No. ~~90-314~~

Dear Ms. Searcy:

Enclosed please find the original and five copies of the
Comments of Metriplex, Inc., in the above-referenced proceeding.

Any questions regarding this filing should be directed
to the undersigned.

Yours very sincerely,



Lawrence J. Movshin

LJM/att
Enclosure

cc: Dr. Thomas P. Stanley
Chairman Alfred C. Sikes
Commissioner James H. Quello
Commissioner Sherrie P. Marshall
Commissioner Andrew C. Barrett
Commissioner Ervin S. Duggan

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**Before The
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In The Matter Of)	GEN Docket No. 90-314
)	ET Docket No. 92-100
Amendment of the Commission's)	RM-7140, RM-7175, RM-7617
Rules to Establish New)	RM-7618, RM-7760, RM-7782
Personal Communication)	RM-7860, RM-7977, RM-7978
Services)	RM-7979, RM-7980
)	

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

To: The Commission

COMMENTS OF METRIPLEX, INC.

Metriplex, Inc. by its attorneys, hereby comments on several aspects of the Commission's Notice of Proposed Rulemaking and Tentative Decision (FCC 92-333, released August 14, 1992) (the "NPRM") in the above-captioned proceeding. Metriplex heartily endorses the Commission's decision to allocate substantial spectrum for the provision of new and innovative narrowband paging services. We strongly applaud the availability of the 3 MHz block of frequencies which have been allocated for such purpose.

On the other hand, we believe that the Commission has erred in denying Metriplex a Pioneer's Preference for its proposed HDNAP service which, when used in conjunction with existing Metriplex-developed software, data telemetry and information services will provide a new advanced nationwide data communications service. Metriplex and HDNAP present the very best example of entrepreneurial spirit and innovation

that warrants and needs the licensing preference provided by the Pioneer's Preference rules in order to survive the lengthy rulemaking process. For the reasons discussed below, Metriplex therefor urges review and reconsideration of the Tentative Decision aspects of the NPRM and some additional modifications to the technical aspects of the NPRM dealing with the 900 MHz allocation.

I. INTRODUCTION

In order to appreciate the importance to Metriplex of the adoption of rules and regulations that will allow for its offering of HDNAP services, and in that regard, the grant to Metriplex of a Pioneer's Preference for a nationwide license for up to least 50 kHz of spectrum in the 931 MHz band, it is necessary to understand who Metriplex is and how it has succeeded even to date in the development of these service-oriented proposals. Metriplex® is a telecommunications company located in Cambridge, Massachusetts. It is a service provider as well as a software and hardware manufacturer for the paging and emerging wireless computing industries.

In 1986, its initial year of existence, Metriplex demonstrated and sold PcPAGE®, the first (and now industry standard) PC-based alphanumeric messaging software. In 1988, Metriplex turned on the GLOBAL24® mobile information network. Many millions of alphanumeric information packets and messages are sent over this network to thousands of customers in major

U.S. cities every year.^{1/} At the present time, the majority of traffic involves financial information and allied commercial activities. Metriplex customers include virtually every major international bank, as well as many large U.S. financial institutions, corporations, and governmental agencies.

Network integrity and resulting reliability are of paramount importance to Metriplex and its customers.^{2/} The major problem encountered in network operations is the extreme variability and relative lack of standardization of paging equipment on both the transmission and the reception sides. Interoperability of equipment is in general poor, due to a relative absence of cooperation between manufacturers and variation of interpretation of standards.^{3/} To counter this

^{1/} The GLOBAL24® network is a composite of a number of carriers and operates 24 hours per day, seven days per week. There are approximately 110 million people within the GLOBAL24(24) signal area. All GLOBAL24® operations are automatically controlled from Metriplex's computer center in Cambridge.

^{2/} We are extremely proud of our accomplishments in this regard. In 1990, the Metriplex central network was down a total of eleven minutes. In 1991 there was no central network downtime. As of this writing there has been none in 1992.

^{3/} Because regional paging networks have historically been built by the consolidation of local carriers' facilities, innovators of new services using those local facilities have often encountered substantial problems with the lack of interoperability of equipment. Metriplex has certainly suffered such consequences in developing its services over these varied carrier networks. By authorizing regional and nationwide licenses in the narrowband spectrum from the outset, many of these problems can be avoided for the innovative entrepreneurs of developing services.

lack of interoperability, and since in most cases Metriplex is the first to implement actual service to the public with new equipment, Metriplex is repeatedly involved in extensive troubleshooting and problem-solving exercises with equipment manufacturers. In certain cases, Metriplex has elected to begin manufacture of its own equipment to further existing standards.

Metriplex is recognized by the paging industry as well as the emerging wireless computing industry as a pioneer in the provision of software and services via alphanumeric radio paging channels. Metriplex engages regularly in high-level substantive discussions with a wide-variety of U.S. equipment manufacturers and information providers to improve the state-of-the-art. In short, Metriplex is a small, fast-moving, and to date highly successful, American high-technology company.

Metriplex's continued existence is directly dependent upon its ability to innovate, develop, and market its services and products. Metriplex is involved in a truly competitive marketplace and must offer the best possible service to the public in order to retain customers.^{4/} Metriplex is not a company exercising a government granted monopoly or limited oligopoly or franchise in order to derive revenue necessary to support its developmental, regulatory or licensing activities. Metriplex cannot raise its rates by fiat when it wants to be

^{4/} In fact, customer satisfaction with services is extremely high, as determined by a recent survey.

more innovative. Indeed, Metriplex successes are determined solely by the public's willingness to pay for the services it creates, then develops, and then actually offers, and not by a scarcity caused by complicated regulations. As such, it enters the "regulatory" game with trepidation and caution, but with a true entrepreneurial spirit and desire to succeed.

II. DISCUSSION

In the NPRM, the Commission reviewed the thirteen requests for Pioneer's Preference filed in ET Docket 92-100 and tentatively concluded that only one application, Mobile Telecommunications Technologies Corporation (Mtel) merits a preference for its proposal. Mtel -- a large, well-funded company -- was rewarded principally because it had been able to fund and implement the development and demonstration of an improved bit transmission rate, submitted an innovative proposal based upon these improved rates that will result in new service functionalities being available to consumers, and developed the technology necessary to implement its proposal. At the same time, the Commission denied Metriplex -- a small, privately funded, entrepreneurial enterprise -- its requested preference, principally because it had not demonstrated pursuant to an experimental license that its technical proposal will work.

As a threshold matter, Metriplex finds the Commission's reasoning and tentative conclusions in this area perplexing and contrary to the clear intent of the Pioneer's Preference

regulations. It must be remembered that in the Notice of Proposed Rulemaking initially proposing a Pioneer's Preference, the Commission suggested that a Pioneer's Preference was needed because the agency's "spectrum allocation and licensing processes appear to make it more difficult and expensive for an innovator to bring a new communications service to the market."^{5/} The agency recognized the chilling effect that such time and expense have on innovation. This included not only the amount of time and money needed in order to develop new services, but also the problems of obtaining from investors the necessary funding for researching and developing a new technology or service without any assurance that those providing the funding would be able to recoup their investment by getting authority to provide the newly developed services.^{6/} Yet in this instance, the Commission has walked away from the opportunity to reward Metriplex for its innovation to date and to provide it the time, reward, and investment value that would encourage the necessary capital additions for its further participation in this innovation.

^{5/} Pioneer's Preference Procedures, 5 FCC Rcd 2766, para. 4.

^{6/} In the Report and Order adopting the Pioneer's Preference rules (6FCC Rcd 3488), and again on reconsideration in the proceeding (7FCC Rd 1808), the Commission reiterated the importance of encouraging innovators to stay in the game by providing a foregone reward of a substantial license at the end of the regulatory process as the foundation for its decision to provide a Pioneer's Preference.

That is a particularly disappointing result in this instance because Metriplex has done far more in the way of market identification and technological development than the Commission has recognized. Indeed, Metriplex has met the necessary burden of demonstrating that its proposal is new, innovative and technically feasible. On further reflection, the Commission should come to a similar conclusion.

That HDNAP is new is best evidenced by the numerous customers in the financial sector who have asked Metriplex to develop information and messaging services with acknowledgment capability. There is simply no comparable service available in the marketplace today, notwithstanding that there is a crying need for it in industries where the health and well being of the American public is involved.

Certainly, for example, improving health care and reducing its costs is one of the cornerstones of the newly elected administration's health care policies. Hospital data services are seen, by many physicians as an important component in the reduction of rapidly rising health care costs. Greatly increased coordination of services as well as improvement in the decision and response time of health care providers will be enabled by the HDNAP services which Metriplex is currently developing and testing. For example, with HDNAP services, a paramedic sending medical telemetry data back to a hospital will know virtually instantaneously that the information has been received.

Industrial data telemetry and monitoring activities that will be achieved using HDNAP can greatly contribute to the productivity and safety of the American workplace. Such recognized concepts as Just-in-Time manufacturing are heavily dependent upon exact, real-time knowledge of the many characteristics of a factory or other industrial setting. Increased awareness of environmental and industrial health/safety needs also place a premium on the ability to minimize or avoid industrial accidents. This ability is greatly enhanced through immediate knowledge of measurements of processes in the workplace. Metriplex has developed HDNAP and is currently testing such services to meet these industrial workplace requirements as well. So the innovative nature of HDNAP should be beyond dispute.

Of course, it cannot be denied that at the time that Metriplex filed its Pioneer's Preference application it had not yet applied for, or received, an experimental license to demonstrate to the fullest extent possible its so-called "ack" transmitter -- a key element of HDNAP.^{1/} This reflects less Metriplex's confidence in the technology and more the fact that Metriplex spends virtually all of its resources in developing and providing new advanced services to the public and has not previously been closely involved in the regulatory aspects of the business that would have given it a better

^{1/} That situation has been remedied and Metriplex now has and is proceeding rapidly under the authority granted by, the requisite experimental authorization.

"heads-up" approach to the filing requirements needed to preserve its opportunities in this arena. Indeed, while Metriplex has spent most of its energies investigating novel technologies for America and for American export, it is quite clear, in hindsight that it has been suffering the very consequences to an undermanned, underfunded innovator that the Commission is trying to remedy in providing the Pioneer's Preference opportunities for such innovative small business entrepreneurs.

This is not to say, however, that Metriplex' concepts were merely theoretical. On the contrary, Metriplex has for the last two years conducted experiments with acknowledgment paging across a lab bench, by transmitting into dummy loads, and has full confidence in its implementation. These activities provided a test bed for the development of network software and user hardware specifications. A prototype exists and further experiments are already underway. HDNAP is not a service that cannot or will not be provided; it is simply one that needs, and indeed deserves, the benefits of a Pioneer's Preference to assure that the innovation can continue with the confidence that it will be adequately rewarded. Only in this way can Metriplex, like other similarly situated innovators, be able to "stay the regulatory course" through already lengthy proceedings to harvest the full fruits of its innovation.

Nor is Metriplex necessarily alone in this regard. Several fine proposals have been made for the use of the 900

MHz band, any one of which is likely to improve the types and levels of service that the American public currently enjoys. In Metriplex' view, then, the Commission's goal should not be to exclude these innovators from participating in the marketplace, by denying them the requested preference and thereby discouraging the continuation of their innovation that they have begun.^{8/} To the contrary, the goal should be to find the approach which will provide for all, or as many as is possible, to continue their innovative developments and to be assured that if they are successful in actually achieving some innovation They will get the opportunity to put that innovation in place. And success should be measured not only by technical success -- which the Commission seems most

^{8/} The Commission very aptly compares the AMS licenses to mineral rights on public lands. The lottery processes of course, lead to the well-known "frequency speculation" business, which greatly raises the cost of obtaining spectrum and delays implementation of services to the public. Typical speculator "buyout" prices for nationwide paging channels have reached into tens of millions of dollars. These prices are a most effective entry barrier, especially for small companies. Since small companies are in general recognized as being the focus of technical innovation, left to the lottery process it becomes extremely difficult for innovation to get "on the air". Auctions have often been proposed as a means of avoiding speculation. This sounds reasonable until one considers that there in fact are large corporations who can in fact afford to buy huge amounts of spectrum, which are then treated as deeds in perpetuity whether or not service is offered to the public. In either event, whether lotteries or auctions are used, it is clear that smaller entrepreneurial companies like Metriplex, who spend their capital on system and service development and not on the "regulatory" game, are most at risk to be out of business before they can afford to get into the marketplace with their innovations unless the FCC awards the necessary Pioneer's Preference.

impressed within the context of its decision to award Mtel its preference -- but even more importantly, in the development of services and products that are deemed successful in the marketplace.

Metriplex believes that such a solution exists. This solution, moreover, can accommodate all parties initially responding to ET 92-100 and also motivate the provision of services to the public. It will not merely reward those who are currently actively engaged in advanced messaging services development and innovation, but it can also provide substantial opportunities for new market entrants as well.

Metriplex's solution is built on a recognition that each of the innovative proposals put forth in this proceeding will take years to develop. At the same time, it must be recognized that the marketplace will, by necessity, be the most effective winnower of service proposals to those that are truly filling a need, separating out those that, while interesting on paper, simply cannot be developed or, if technically possible, don't achieve any marketplace response. In Metriplex' view, the Commission should take advantage of this necessary transitional period to allow more proposals to be developed initially, and leaving to the immediate marketplace reaction the determination as to which services survive for the long term.

For example, Metriplex initially proposed a band plan which required at least 1 MHz of spectrum to meet the optimal demands for the HDNAP services. This was done because

Metriplex traffic projections showed that this amount of spectrum would be required within ten years. Similar spectrum demands were made by others, again assuming that no other services would be licensed in the 931 MHz band and that the full, long-term projections would be satisfied. In truth, of course, no party to these proceedings could immediately fill all of the requested spectrum within its band plan with meaningful traffic. New services require time to develop and to market, time that will be used by the consumers to choose those that will succeed and those that will not.

Accordingly, Metriplex proposes that all parties who have requested a Pioneer's Preference in the initial proceeding be granted a single, nationwide license for at least a 50 kHz block in either the 931 or 941 MHz bands (with a corresponding block in the 901-902 MHz band for low-power uses, e.g., for the lower powered transmissions associated with the so-called "ack" portion of the HDNAP proposal) to implement their basic service proposals. The current group of applicants would be authorized either to build their services throughout the nation; alternatively they could reduce the service area to a region, use less than the authorized spectrum, or withdraw. Under all circumstances, the licensees would be limited to providing the services and utilizing the technology proposed in their Pioneer's Preference application -- there could be no speculation in licenses, by creating an innovative concept on paper but utilizing the spectrum to provide existing or basic paging services.

Most importantly, at the end of a 36 month period, the licensee would be required to submit a full report to the Commission as to what services had, in fact, been provided to the public, over what area, and as to actual construction then under contract. Based on that report, the agency would then either continue the license grants, limit them to the specific markets or regions then served or under immediate contemplation for service, or, in the absence of any meaningful development of service to the public, revoke them.

In plain terms, this approach lets those who say that they are really capable of, and interested in, providing new and innovative services to the public get out there and complete their proposed development, and then "use it or lose it". It gives investors and innovators the tools to develop their ideas -- primarily the lifeblood of the idea, the radio spectrum -- while also demanding that they carry forward their concepts to some fruition or lose the valuable spectrum that they have been given. It will encourage risk taking, by providing the incentives of a business for successful experimentation, while discouraging speculation, since the spectrum has no value if, at the end of three years, the concept has proven a failure, either in implementation or in the harshest court of all, the consumer marketplace. And while it gives true innovators plenty of time to bring their ideas to fruition, it assures that spectrum that is not being used will not lay fallow for a ten-year license term.

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Metriplex asks the Commission to utilize this proceeding to distribute spectrum equitably to those who are serious about using it in developing and offer services to the public. Metriplex believes that this step is crucial to develop services to the American public as well as to sell American products to the world. To that end, we urge the reformulation of the proposed spectrum allocation to a plan that provides existing innovators with the necessary tools to move their innovations forward, in the form of Pioneer's Preferences for at least 50 kHz licenses, and that directs the to complete their innovative services and technologies and bring them to the marketplace or lose their opportunities to do so. Metriplex should receive its Pioneer's Preference and be authorized to develop its proposed HDNAP service.

Respectfully submitted,

METRIPLEX, INC.

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